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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,465	10/07/2005	Takao Harada	278363US0PCT	2247
22850	7590	03/26/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ZHU, WEIPING	
			ART UNIT	PAPER NUMBER
			1793	
			NOTIFICATION DATE	DELIVERY MODE
			03/26/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/552,465	<b>Applicant(s)</b> HARADA ET AL.	
	<b>Examiner</b> WEIPING ZHU	<b>Art Unit</b> 1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 26, 2009 has been entered.

### ***Status of Claims***

2. Claims 1-13 are currently under examination wherein claim 1 has been amended in applicant's amendment filed on December 17, 2008.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1, the claim limitation of "that is not under hydrogen pressure" is not supported by the specification of the instant invention.

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The instant specification only discloses that the conventional hydrogen donor solvent needs to be rehydrogenated for recycling the solvent (page 5, lines 6-22); the pressure in the aging tank is about 1MPa (0.5 to 1.5 MPa) (page 13, line 9 to page 14 line 24); and different portions in the second embodiment of the invention (page 17, line 19 to page 20, line 1) without excluding a hydrogen pressure in the mixing and aging steps as presently claimed in instant claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brink et al. (US 4,045,187) in view of Miller (US 4,617,105).

With respect to claims 1 and 2, Brink et al. ('187) discloses a method for producing coal for metallurgy by extracting coal with an organic solvent, the method comprising: preparing a raw material slurry by mixing the coal with the organic solvent; heating the raw material slurry to extract a soluble component of the coal in the organic solvent; sedimenting an insoluble component of the coal by filtration to separate the soluble coal component containing an extracted coal and the insoluble coal component containing a residual coal; and removing the solvent by distillation (col. 1, line 1 to col. 2, line 8). Brink et al. ('187) does not disclose that the mixing and aging steps are not

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performed under a hydrogen pressure as claimed in the instant claim 1. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the hydrogen pressure of Brink et al. ('187) with a nitrogen pressure with an expectation of success, because Miller '105 (col. 4, line 67 to col. 5, line 14) discloses that a hydrogen pressure and a nitrogen pressure in a coal extraction are functionally equivalent in terms of improving the extraction efficiency.

With respect to claim 3, Brink et al. ('187) does not disclose the second solvent removing step as claimed. However it is well held that in general, the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and results, was held to be not patentably distinguish the processes. *Ex parte Rubin* 128 USPQ 159 (PO BdPatApp 1959). In the instant case, Brink et al. ('187) discloses that the solvent is removed by distillation (col. 1, lines 24-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the solvent in one or two or more steps as desired in order to meet requirements of solvent refined coal for different applications.

With respect to claims 4 and 5, Brink et al. ('187) discloses compounding the extracted coal and the residual coal to produce an upgraded coal with less than 12% by weight of the residual coal (col. 1, line 55 to col. 2, line 8), which overlaps the claimed range.

With respect to claims 6 and 7, Brink et al. ('187) discloses the heating temperature and time ranges in the extracting step are 350-500° C and 15-120 minutes

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respectively (col. 1, lines 10-29). The ranges of Brink et al. ('187) overlap the claimed ranges respectively.

With respect to claim 8, Miller ('105) discloses extracting coal in a nitrogen atmosphere at atmospheric or elevated pressures (col. 4, line 67 to col. 5, line 7). The pressure range of Miller ('105) overlaps the claimed range.

With respect to claim 9, Brink et al. ('187) discloses the organic solvent is a aromatic compound with a boiling temperature between 200-450° C (col. 3, lines 16-22), which reads on the claimed organic solvent.

With respect to claims 10 and 11, Brink et al. ('187) discloses the organic solvent is recovered by distillation and recycled without mentioning the need to rehydrogenate the solvent to be recycled (col. 1, lines 24-26).

With respect to claim 12, Brink et al. ('187) discloses recovering the organic solvent comprising vacuum distillation (col. 4, lines 22-25).

With respect to claim 13, it is a product-by-process claim. Even through product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. Brink et al. ('187) discloses an upgraded coal, which reasonably appears to be only slightly different than the respective claimed product in the product-by-process claim. A rejection based on section 103 of the statute is eminently fair and acceptable. See MPEP 2113.

### ***Response to Arguments***

5. The applicant's arguments filed on December 17, 2008 have been fully considered but they are moot in light of new grounds of rejections as stated above.

***Conclusions***

6. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

3/14/2009

/George Wyszomierski/  
Primary Examiner  
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